

**US ARMY MEDICAL RESEARCH AND MATERIEL COMMAND (USAMRMC)
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP)
FISCAL YEAR 2017 (FY17) BREAST CANCER RESEARCH PROGRAM (BCRP)**

DESCRIPTION OF REVIEW PROCEDURES

The programmatic strategy implemented by the FY17 BCRP called for applications in response to program announcements (PAs) for two award mechanisms released in August 2017:

- Breakthrough Award Levels 1 and 2
- Breakthrough Fellowship Award

Applications were received for these two PAs in November 2017 and peer reviewed in February 2018. Programmatic review was conducted in April 2018.

In response to the Breakthrough Award Levels 1 and 2 PA, 516 compliant applications were received, and 29 (5.6%) were recommended for funding, for a total of \$29.9 million (M).

In response to the Breakthrough Fellowship Award PA, 65 compliant applications were received, and 6 (9.2%) were recommended for funding, for a total of \$2.9M.

Submission and award data for the FY17 BCRP Breakthrough Award Levels 1 and 2 and Breakthrough Fellowship Award are summarized in Table 1 below.

Table 1. Submission/Award Data for the FY17 BCRP*

Mechanism	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Breakthrough Award – Level 1	189	10 (5.3%)	\$5,761,391
Breakthrough Award – Level 1 – Partnering PI Option	96	1 (1.0%)	\$1,030,200
Breakthrough Award – Level 2	150	13 (8.7%)	\$15,030,072
Breakthrough Award – Level 2 – Partnering PI Option	81	5 (6.2%)	\$8,055,362
Breakthrough Fellowship Award	65	6 (9.2%)	\$2,896,571
Total	581	35 (6.0%)	\$32,773,596

*These data reflect funding recommendations only. Pending FY17 award negotiations, final numbers will be available after September 30, 2018.

THE TWO-TIER REVIEW SYSTEM

The USAMRMC developed a review model based on recommendations of the 1993 Institute of Medicine (IOM) of the National Academy of Sciences report, *Strategies for Managing the Breast Cancer Research Program: A Report to the Army Medical Research and Development Command*. The IOM report recommended a two-tier review process and concluded that the best course would be to establish a peer review system that reflects not only the traditional strengths

of existing peer review systems, but also is tailored to accommodate program goals. The Command has adhered to this proven approach for evaluating competitive applications. An application must be favorably reviewed by both levels of the two-tier review system to be funded.

THE FIRST TIER—Scientific Peer Review

Breakthrough Award Levels 1 and 2 and Breakthrough Fellowship Award applications were peer reviewed in February 2018 by 14 panels of researchers, clinicians, and consumer advocates based on the evaluation criteria specified in the PAs.

Each peer review panel included a Chair, scientific reviewers, consumer reviewers, and a nonvoting Scientific Review Officer (SRO). The primary responsibility of the panelists was to review the technical merit of each application based on the evaluation criteria specified in the relevant PA.

Individual Peer Review Panels

The Chair for each panel presided over the deliberations. Applications were discussed individually. The Chair called upon the assigned reviewers for an assessment of the merits of each application using the evaluation criteria published in the appropriate PA. Following a panel discussion, the Chair summarized the strengths and weaknesses of each application, and the panel members then rated the applications confidentially.

Application Scoring

Evaluation Criteria Scores: Panel members were asked to rate each peer review evaluation criterion as published in the appropriate PA. A scale of 1 to 10 was used, with 1 representing the lowest merit and 10 the highest merit. The main reasons for obtaining the criteria ratings were to (1) place emphasis on the published evaluation criteria and provide guidance to reviewers in determining an appropriate overall score, and (2) provide the applicant, the Programmatic Panel, and the Command with an informed measure of the quality regarding the strengths and weaknesses of each application. The evaluation criteria scores were not averaged or mathematically manipulated in any manner to connect them to the global or percentile scores.

Overall Score: To obtain an overall score, a range of 1.0 to 5.0 was used (1.0 representing the highest merit and 5.0 the lowest merit). Reviewer scoring was permitted in 0.1 increments. Panel member scores were averaged and rounded to arrive at a two-digit number (1.2, 1.9, 2.7, etc.). The following adjectival equivalents were used to guide reviewers: Outstanding (1.0–1.5), Excellent (1.6–2.0), Good (2.1–2.5), Fair (2.6–3.5), and Deficient (3.6–5.0).

Summary Statements: The SRO on each panel was responsible for preparing a Summary Statement reporting the results of the peer review for each application. The Summary Statements included the applicants' abstracts, the evaluation criteria and overall scores, peer reviewers' written comments, and the essence of panel discussions. This document was used to report the peer review results to the Programmatic Panel. It is the policy of the USAMRMC to make Summary Statements available to each applicant when the review process has been completed.

THE SECOND TIER—Programmatic Review

Programmatic review was conducted in April 2018, by the FY18 Programmatic Panel and ad hoc members. The reviewers were a diverse group of basic and clinical scientists and consumer advocates, each contributing special expertise or interest in breast cancer. Programmatic review is a comparison-based process that considers scientific evaluations across all disciplines and specialty areas. Programmatic Panel members do not automatically recommend funding applications that were highly rated in the technical merit review process; rather, they carefully scrutinize applications to allocate the limited funds available to support each of the award mechanisms as wisely as possible.

Programmatic review criteria published in the Breakthrough Award Levels 1 and 2 and Breakthrough Fellowship Award PAs were as follows: ratings and evaluations of the peer reviewers; relevance to the mission of the Defense Health Program (DHP) and FY17 BCRP; adherence to the intent of the award mechanism; program portfolio composition; relative impact; and relative innovation (*Breakthrough Award Funding Level 1 only*).

After programmatic review, the Commanding General, USAMRMC, and the Director of the Defense Health Agency J9, Research and Development Directorate, approved funding for the applications recommended during programmatic review.